

REMARKS

Claims 23 and 25-48 are pending in this application. Claims 23, 35 and 43-47 are independent claims. Claims 23, 31, 35-42 and 44-47 have been amended, claim 24 has been cancelled, and claim 48 has been added, by this Amendment.

The Office Action dated May 28, 2008 objected to claims 24-30, 38 and 39, and rejected claims 23-34 and 38 under 35 USC 112, second paragraph. The Office Action rejected claims 23-34 and 47 under 35 USC 101 as being directed to non-statutory subject matter. The Office Action also rejected claims 23-29, 31, 35-38, 40 and 43-47 under 35 USC 102(e) as being anticipated by U.S. Patent No. 5,444,718 to Ejzak, and rejected claims 30, 32-34, 39, 41 and 42 as being rendered obvious by Ejzak in view of other patents.

Interview Summary Record

Applicant gratefully acknowledges the telephone interview on or about May 23, 2008. In the interview, the Examiner subsequently provided the requested clarification of the objection to claims 38 and 39, and of the indefiniteness rejection of claim 38, and also provided suggestions for amendments to claims 23-34. An Office Action containing the clarifications was provided simultaneously with the Examiner's interview summary dated May 28, 2008.

However, in the interview, the Examiner refused to respond on the written record to applicant's argument on September 7, 2007 that the Beauregard case compelled a conclusion that claim 47 is directed to statutory subject matter. When requested to indicate the reason(s) for such refusal, the Examiner furthermore refused to state any reason for such refusal. The Examiner also indicated that, although he would provide clarification as indicated above, he would not follow the procedure set forth in MPEP 710.06 and grant applicants' request for additional time in the Request for Complete Office Action. He further indicated that applicants must respond on this date, which is six months from the original incomplete Office Action dated January 11, 2008, or the application would be abandoned.

Claim Objections - Claims 24-30, 38 and 39

The grounds for the objections to claims 24-30, 38 and 39 are set forth on page 2 of the Office Action. Specifically, the claims are objected to under 37 CFR 1.75(c) as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicants respectfully traverse the objections.

The objection apparently concludes that, since claims 24-30 are dependent on a method claim, they can only further limit the method claim if they themselves recite some "step/action" of the method, and similarly concludes that, since claims 38 and 39 are dependent on an apparatus claim, they can only further limit the apparatus claim if they themselves recite some "structural element" of the apparatus. Applicants respectfully submit that the conclusion is incorrect and traverses the objections.

Assuming for the sake of discussion that a claim was dependent on an independent claim directed to a method of purifying a liquid and further recited that the liquid must be water, the dependent claim would be objected under the conclusion above since the "water" limitation is not a step/action of the purifying method. A similar analogy could be constructed for an apparatus claim. In the example given, the scope of the dependent claim directed to a method of purifying water is undoubtedly narrower than the scope of the independent claim directed to a method of purifying a liquid. Applicants respectfully submit that, since the scope of the dependent claim is narrower than the scope of the independent claim, the dependent claim complies with 37 CFR 1.75(c), which requires only that the previous claim be further limited and does not attempt to restrict the type or manner of the further limitation. Thus, it is not appropriate to object to claims 24-30, 38 and 39 for failing to further limit the claims from which they depend.

As an additional reason, applicants note that claim 38 does in fact recite limitations of the datagram checking unit (shown as element 9 of the embodiment in the drawings of this application). Thus, claim 38 does in fact further limit what is apparently regarded in the objection as a "structural element" in claim 35.

35 USC 112 Rejections - Claims 23-34 and 38

The grounds for the rejection of claims 23-34 and 38 under 35 USC 112, second paragraph, is set forth on pages 2-3 of the Office Action. Specifically, the claims are rejected as being incomplete for omitting essential subject matter. Applicants have amended claims 23-34 in this Amendment. While it is noted here that claims 23-34 as amended should not be rejected under 35 USC 112, the amendments were made for other purposes and it is not the circumstance that all of the subject matter added to independent claim 23 is considered to be essential subject matter. While the rejection of claims 23-34 is thus rendered moot, applicants respectfully traverse the rejection of claim 38.

The rejection states that claim 38 is rejected because it omits "essential structural cooperative relationships of elements, such omission amounting to a gap between the

necessary structural connections." In particular, the rejection asserts that claim 38 fails to recite a "structural element further limiting the apparatus of claim 35." This, of course, is the same fact that is applied in the objection to claim 38 discussed above, and the rejection seems to be concerned that claim 38 recites no further "structural element" rather than that claim 38 fails to recite "essential" subject matter. Otherwise, claim 35 would also be rejected as well as since any essential matter missing from claim 38 is also missing from 35.

35 USC 101 Rejections - Claims 23-34 and 47

The grounds for the rejections of claims 23-34 and 47 as being directed to non-statutory subject matter under 35 USC 101 are set forth on pages 3-4 of the Office Action. Applicants have amended claims 23-34 in this Amendment. Claims 23-34 as amended should not be rejected as being directed to non-statutory subject matter since they are directed to the manner of generating acknowledgement messages rather than to any "substantial practical application" of the acknowledgement messages. While the rejection of claims 23-34 is thus overcome by this amendment, applicants again respectfully traverse the rejection of claim 47.

Although claim 47 has been amended to be consistent with the changes made to independent method claim 23, applicants again rely on the argument previously made on page 7 of the Amendment filed on September 7, 2007 (and repeated in the Request for Clarification of Office Action filed on April 11, 2008) to overcome the 101 rejection of claim 47. Unfortunately, because this argument based on the Beauregard case was not answered in the Office Action, and the Request for Clarification of Office Action has not been addressed, the prosecution of this application is stalled due to no fault of applicants.¹

Anticipation Rejection - Claims 23-29, 31, 35-38, 40 and 43-47

The grounds for the anticipation rejection of claims 23-29, 31, 35-38, 40 and 43-47 is set forth on pages 6-9 of the Office Action. Specifically, the claims are rejected as being anticipated by the preferred embodiments illustrated in Figs. 2-4 and 7 and discussed at col. 2, line 11, to col. 4, line 63, of U.S. Patent No. 5,444,718 issued to Ejzak et al (these preferred embodiments hereinafter referred to simply as "Ejzak"). Applicants respectfully traverse the

¹ Applicants repeat and reiterate their previous assertion that the Office Action is incomplete for this reason.

rejection on the grounds that it fails to establish that Ejzak includes each and every one of the combination of features recited in the rejected claims.

As a first example, each one of the independent claims recites the feature of generating a plurality of data units, each data unit comprising a status bit indicative of the status of the data unit and a plurality of spacing bits that together form a binary representation of a number indicative of the spacing between one incorrectly received datagram and a succeeding incorrectly received datagram.

Ejzak appears to relate to a bitmap acknowledgment scheme similar to the prior art scheme described on page 2 of this application. Ejzak utilizes an acknowledgement scheme for informing a transmitter which data packets have been correctly received and which data packets need to be retransmitted. The receiver sends the transmitter a message that identifies, using a bitmap, the packets that should be retransmitted. The message identifies the first packet that was incorrectly received ("NR") and the last packet that was received ("NL"). The bitmap then defines the status of the first incorrect packet, the last packet and the intervening packets by a sequence of bits representing each of those packets. A "one" indicates that the corresponding packet was correctly received while a "zero" indicates that the corresponding packet was incorrectly received. The bitmap thus contains the same number of bits as the number of packets received since the last correctly received packet. Incorrectly received packets can be identified from the location of zeros in the bitmap.

Because the number of packets received since the last correctly received packet might be relatively large, Ejzak also utilizes a partial bitmap for use when traffic is heavy. The message identifies a particular group of packets and the partial bitmap then contains one bit for each of the packets in that group. The message contains a "c" bit that indicates whether the first incorrectly received packet ("NR") is part of the group of packets represented by the bitmap. Thus, in Ejzak, a plurality of data units are not generated as recited in the rejected independent claims. There is only a bitmap or a partial bitmap.

Nor does Ejzak utilize data units having a status bit indicative of the status of the data unit and a plurality of spacing bits that together form a binary representation of a number indicative of the spacing between one incorrectly received datagram and a succeeding incorrectly received datagram. The rejection asserts that each bit of the bitmap in Ejzak is a status bit because a "one" indicates that a data unit was correctly received and a "zero" indicates that the data unit was incorrectly received. However, the assertion confuses the terms "data unit" and "datagram". The "one" and "zero" bits of Ejzak's bitmap are indicative

of a datagram (i.e., whether it was correctly or incorrectly received). Since Ejzak does not generate data units, it follows logically that the bits are not indicative of the status of a data unit. Nor are contiguous groups of ones in Ejzak's bitmap spacing bits as recited in the claims. The length of any contiguous group of "ones" in Ejzak will vary widely since it is directly dependent on the spacing between incorrectly received packets. Therefore, nothing similar to the concept of a "data unit" is disclosed by Ejzak. Also, there is no separate status bit in Ejzak that is associated with the contiguous groups of "ones". If the rejection's assertion was correct, each of the "one" bits would have to simultaneously perform as both a spacing bit and a status bit, which is not possible.

Claims 25, 45 and 46


Claim 25 is dependent on claim 23 and additionally recites that one value of a status bit is indicative of "its corresponding data unit not being the last data unit of a set of consecutive data units whose spacing bits together represent a number indicative of a spacing between one incorrectly received datagram and a succeeding incorrectly received datagram." Claims 45 and 46 have been amended to recite the status bit in a manner substantially similar to claim 25.

The rejection cites col. 9, lines 10-15, of the patent as disclosing this feature and rejection relies upon the "c" bit in Ejzak as meeting this feature. However, this is inconsistent with the assertion addressed in the rejection of the independent claims above that the bits of the bitmap are status bits. The rejection states that the "c" bits in Ejzak anticipate claim 25 because it indicate whether more partial bitmaps should be expected at the transmitter. However, this is not the same as indicating that a data unit is the last data unit of a set of consecutive data units whose spacing bits together define a particular spacing between two incorrectly received datagrams. Indeed, in Ejzak, consecutive partial bitmaps are not intended to combine to form a representation of a number that indicates the spacing between one incorrectly received datagram and the next incorrectly received datagram. Therefore, the "c" bit in Ejzak cannot be used to indicate that a data unit is the last data unit of a set of consecutive data units whose spacing bits together define a particular spacing between two incorrectly received datagrams.

Applicants hereby petition for an extension of time of the response period for the Office Action.² The Commissioner is hereby authorized to charge the extension fee(s), and any other fees which may be determined to be necessary for the consideration of this Amendment, or to otherwise avoid abandonment of this application, to Deposit Account No. 13-0760 (06173.4010US).

Respectfully Submitted,

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² The necessary extension of time is unclear. Applicants respectfully submit that, pursuant to MPEP 710.06, they are entitled to at least one month in which to consider the clarification of the objection to claims 38 and 39, and the indefiniteness rejection of claim 38, in the Office Action dated May 28, 2008. However, if measured from the date of the original Office Action dated January 11, 2008, then three months of extension are hereby authorized, although believed to be inappropriate due to the clarification. Indeed, since the original Office Action remains incomplete due to the failure to answer the argument against the 101 rejection of claim 47, no extension of time is believed necessary.